

**FRONT COVER NOTES FOR
GENERAL CONTRACTORS
ESTIMATOR
EXAMINATION SPECIFICATION**

This examination will be developed based on the following format:

<u>SECTION I</u>		<u>VALUE</u>
(1)	50 Multiple Choice Items	50%
(A)	8 items – General Skills	15%
(B)	7 items – Pre-Bid/Pre-Proposal	14%
(C)	11 items – Quantity Take-off	22%
(D)	12 items – Costing	24%
(E)	8 items – Bid/Proposal	16%
(F)	4 items – Post Bid	8%
 <u>SECTION II</u>		
(1)	Quantity Take-off Item	20%
(2)	Essay/Letter Writing Item	10%
		20%
(3)	Working With Specifications	
		TOTAL VALUE
		100%

**GENERAL CONTRACTORS - ESTIMATOR
EXAMINATION SPECIFICATION**

SECTION: **GENERAL SKILLS**

VALUE: 15%
(8 questions)

TASK NO. & VALUE	TASK DESCRIPTION	TASK SUPPORTING KNOWLEDGE AND SKILLS
G.P.1000.01.19 1 question	Ensure a list of acceptable suppliers, carriers and rental companies is maintained.	(a) Ability to assess the reliability of service. (b) Ability to evaluate the cost in comparison to reliability.
G.P.1000.01.01 2 questions	Communicate clearly with own forces, owner, client, consultant, regulatory agencies and other contractors.	(a) Ability to communicate the various types of contracts to field staff. (b) Ability to produce written correspondence and reports. (c) Ability to make oral presentations. (d) Ability to electronically communicate by phone, Internet, etc. (e) Ability to free-hand draw. (f) Ability to maintain good relations with owner, client, and consultants. (g) Knowledge of the consultant's/consulting engineer's role. (h) Knowledge of the contractual responsibilities of the owner, client and consultant. (i) Knowledge of authority and legal responsibilities of government inspectors. (j) Knowledge of code requirements for specialty trades. (k) Knowledge of contract documents and progress information usually required by owner/client/consultants. (l) Ability to use computer software packages. (m) Knowledge of cost implications of legislation. (n) Ability to respect the company's policies and procedures and understand the level of authority.
G.P.1000.01.22 * 1 question	Keep abreast with technological changes in the industry.	(a) Ability to maintain a current library of codes and regulations. (b) Ability to maintain current estimating practices. (c) Ability to maintain current data books. (d) Knowledge of economics micro/macro.

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G.E.1200.01.01 1 question	Establish a historical database of information from jobs and/or estimates completed.	(a) Knowledge of computer databases containing historical cost information. (b) Ability to maintain an efficient manual database. (c) Ability to maintain a historical database. (d) Knowledge of the master format (detailed) and elemental cost systems (preliminary). (e) Ability to prepare and maintain labour productivity records. (f) Ability to perform cost benefit or life cycle analysis. (g) Ability to conduct a time study of a unit cost of labour. (h) Ability to compile a list by project, on competitor's bidding practices.
G.E.1200.01.02 * 1 question	Read the marketplace.	(a) Ability to effectively communicate orally and in writing. (b) Ability to make presentations. (c) Ability to use a historical database. (d) Ability to report to management on company's overall performance and estimating accuracy in the market. (e) Ability to report on competitor's bidding history.
G.P.1000.01.23 1 question	Respond to design/build and construction requests.	(a) Knowledge of current codes and regulatory agencies. (b) Knowledge of software packages. (c) Ability to participate as a partner in a multi-disciplinary design/build team. (d) Ability to perform elemental cost analysis. (e) Ability to interpret client's needs. (f) Ability to respond to an expression of interest request. (g) Ability to assemble pre-qualification documents.
G.P.1000.03.05 2 questions	Review contract documents.	(a) Knowledge of standard forms of construction contracts. (b) Knowledge of principles of law of contract between owners (or their agents), general contractors, subcontractors and suppliers. (c) Knowledge of different types of construction contracts (unit price, lump sum, turn key, design build, alliance, value, etc.).
G.E.1200.01.03 1 question	Ensure material data is readily available and updated.	(a) Knowledge of product data catalogues. (b) Knowledge of construction materials standards.

*** Use only one of these tasks on an exam at a time and alternate by version**

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SECTION: PRE-BID/ PRE-PROPOSAL

**VALUE: 14%
(7 questions)**

TASK NO. & VALUE	TASK DESCRIPTION	TASK SUPPORTING KNOWLEDGE AND SKILLS
G.E.1200.02.04 1 question	Collect relevant information on prospective construction work.	(a) Ability to research prospective work. (b) Ability to maintain a database of prospective work. (c) Ability to assess the owner’s financial capacity.
G.E.1200.02.01 * 1 question	Determine, in consultation with senior management, which jobs to tender.	(a) Ability to determine the information required to make a decision to bid a job. (b) Ability to estimate the value of the project by unit cost or elemental cost analysis. (c) Ability to report to Company Management on main aspects of project to be tendered. (d) Knowledge of types of bid. (e) Knowledge of competitors. (f) Ability to prepare a bid strategy.
G.E.1200.02.02 1 question	Compile a checklist of all trade divisions.	(a) Knowledge of scope of work conditions imposed by local trade associations on their members. (b) Ability to research contract items which subcontractors commonly exclude. (c) Knowledge of local bid depository rules of procedure and scope of work. (d) Ability to maintain a record of receipt and distribution of all bid documents (plans, specifications and addenda). (e) Ability to solicit selected trade contractor quotations through trade journals, selected mailing and telephoning.
G.E.1200.02.03 1 question	Solicit selected subcontractor quotations.	(a) Knowledge of trade journals, selected mailing and telephoning, association bulletins.
G.P.1000.02.03 1 question	Study plans, specifications, addenda and all construction conditions set by owner/consultant.	(a) Ability to detect early determination of any discrepancies, ambiguities, omissions, etc. in contract documents. (b) Ability to study drawings, and specifications early in the job. (c) Knowledge of performance requirements (accelerated schedule, etc.) (d) Ability to detect of potential claims. (e) Ability to be aware of any environmental conditions of the contract. (f) Ability to understand the liability of errors or omissions in drawings and noting such to management and owner/consultant. (g) Knowledge of document hierarchy.

**GENERAL CONTRACTORS - ESTIMATOR
EXAMINATION SPECIFICATION**

TASK NO. & VALUE	TASK DESCRIPTION	TASK SUPPORTING KNOWLEDGE AND SKILLS
G.P.1000.02.02 1 question	Conduct a pre-construction site inspection in conjunction with management team.	(a) Ability to assess existing structure, utilities, storage space, obstructions, site access, etc. (b) Ability to conduct a job site analysis (notes, pictures, reports).
G.P.1000.02.04 1 question	Solicit competitive prices.	(a) Knowledge of availability, applications, cost effectiveness and capacities of various types of equipment. (b) Knowledge of cost implications of lease vs. purchase. (c) Ability to negotiate considerations. (d) Knowledge of material specifications and costs.
G.E.1200.05.04 1 question	Brief senior management on major bid assumptions.	(a) Ability to identify the risks associated with the project. (b) Ability to identify unclear documentation. (c) Ability to justify the cost estimate. (d) Ability to express a confidence factor for subcontract awards. (e) Ability to communicate the schedule. (f) Ability to communicate the resources required to complete the project.
G.E.1200.05.05 * 1 question	Brief senior management on market position.	(a) Ability to communicate the list of competitors. (b) Ability to communicate the advantages of the project. (c) Ability to communicate the disadvantages of the project.

***Only test one of these tasks on the examination and alternate between exam version**

SECTION: QUANTITY TAKE-OFF

**VALUE: 22%
(11 questions)**

TASK NO. & VALUE	TASK DESCRIPTION	TASK SUPPORTING KNOWLEDGE AND SKILLS
G.E.1200.03.01 2 questions	Maintain standard procedures for all estimating work.	(a) Ability to use take-off and pricing sheets. (b) Ability to use computer estimating packages. (c) Ability to maintain an industry-wide standard method of measurement. (d) Ability to maintain a company method of measurement.

**GENERAL CONTRACTORS - ESTIMATOR
EXAMINATION SPECIFICATION**

TASK NO. & VALUE	TASK DESCRIPTION	TASK SUPPORTING KNOWLEDGE AND SKILLS
G.E.1200.03.02 3 questions	Measure quantities from bid documents.	<ul style="list-style-type: none"> (a) Ability to interpret civil, consultant, structural, mechanical, and electrical drawings. (b) Ability to interpret specifications. (c) Knowledge of document hierarchy. (d) Ability to interpret codes and Regulatory agencies requirements. (e) Ability to take-off quantities in the appropriate sequence. (f) Ability to summarize and verify quantities. (g) Knowledge of take-off quantities for such non-standard items as renovation, demolition, unique construction methods, specifications, etc. (h) Ability to measure engineered construction such as sewers, roads, shoring and underpinning and mass excavation works. (i) Knowledge of construction materials and methods used in existing buildings. (j) Knowledge of new or innovative methods and materials. (k) Ability to make imperial/metric conversions.
G.E.1200.03.03 2 questions	Clarify with consultant all discrepancies, ambiguities, omissions, etc.	<ul style="list-style-type: none"> (a) Ability to accurately obtain written instruction on oral queries. (b) Ability to accurately record all oral and written queries. (c) Ability to accurately check and note all addenda.
G.E.1200.03.04 2 questions	Co-ordinate and communicate with subcontractors/suppliers on scope of work.	<ul style="list-style-type: none"> (a) Ability to effectively communicate orally and in writing. (b) Ability to distribute addenda to subcontractors/suppliers.
G.E.1200.04.09 2 questions	Preparing a take-off summary.	<ul style="list-style-type: none"> (a) Ability to compile all material, labour, and equipment to determine total cost. (b) Knowledge of presenting summary to company convention. (c) Ability to use computer software packages.

SECTION: COSTING

**VALUE: 24%
(12 questions)**

TASK NO. & VALUE	TASK DESCRIPTION	TASK SUPPORTING KNOWLEDGE AND SKILLS
G.E.1200.04.01 2 questions	Estimate labour unit cost.	<ul style="list-style-type: none"> (a) Knowledge of the factors which limit or foster labour productivity. (b) Knowledge of methods and systems used in construction operations. (c) Knowledge of regulations regarding crew composition, union regulated, or otherwise. (d) Ability to utilize the historical data base of information of jobs and/or estimates completed. (e) Knowledge of on-site analysis of work and methods. (f) Ability to analyse cost reports and other statistics. (g) Ability to assess, in consultation with field supervision, construction methods and systems. (h) Knowledge of reference sources on labour factors. (i) Ability to obtain from supervision feedback on company's tables of labour productivity. (j) Knowledge of how unit labour costs are calculated.
G.E.1200.04.02 1 question	Determine equipment requirements.	<ul style="list-style-type: none"> (a) Ability to assess, in consultation with company management and field personnel, utility of various types of equipment. (b) Ability to compare costs of equipment to labour. (c) Knowledge of various types of equipment capabilities. (d) Knowledge of the company equipment inventory. (e) Knowledge of equipment rental costs. (f) Ability to assess the project and determine whether to rent equipment or to use the company's.
G.E.1200.04.03 1 question	Compile unit costs.	<ul style="list-style-type: none"> (a) Ability to compile all material, labour, equipment, and general requirements to determine unit prices. (b) Ability to compile unit costs for additions and deletions.

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TASK NO. & VALUE	TASK DESCRIPTION	TASK SUPPORTING KNOWLEDGE AND SKILLS
G.E.1200.04.04 1 question	Cost standard work.	(a) Ability to interpret catalogues and applicable discounts. (b) Ability to interpret supplier quotations and to ensure material conforms to specifications. (c) Knowledge of types of equipment and standard applications. (d) Ability to apply labour units.
G.E.1200.04.05 1 question	Cost speciality work.	(a) Ability to interpret catalogues and applicable discounts. (b) Ability to interpret supplier quotations and to ensure material conforms to specifications. (c) Knowledge of types of equipment and standard applications. (d) Knowledge of rental rates for speciality equipment. (e) Ability to adjust labour for project condition.
G.P.1000.02.01 1 question	Advise project management at tendering stage on construction methods to be used, and indirect costs of construction.	(a) Ability to assess requirements for supervision and indirect costs. (b) Ability to keep abreast of new cost-effective methods of construction. (c) Knowledge of all applicable project taxes. (d) Ability to locate existing services.
G.S.1100.03.06 1 question	Assist in preparation of construction schedule by construction team.	(a) Knowledge of bar chart, network diagramming (CPM, PERT) and other diagrammatic methods of scheduling. (b) Knowledge of resource levelling throughout the project.
G.P.1000.02.06 1 question	Analyse reports on out-of-town conditions.	(a) Ability to assess local labour situations, accessibility to site, travel requirements, lodging, local bylaws, availability of material and equipment, climate, etc. (b) Ability to analyse local labour availability and productivity. (c) Ability to perform on-site analysis of work and methods. (d) Ability to conduct a risk analysis of taking the project. (e) Ability to assess, in consultation with field supervision, construction methods and systems to be used in project.
G.E.1200.04.06 1 question	Analyse quotations submitted by subcontractors/suppliers.	(a) Ability to prepare spread sheets on speciality contractors and suppliers. (b) Ability to compare prices submitted by contractors and suppliers.

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EXAMINATION SPECIFICATION**

TASK NO. & VALUE	TASK DESCRIPTION	TASK SUPPORTING KNOWLEDGE AND SKILLS
G.E.1200.04.07 1 question	Calculate contractor's costs.	(a) Ability to assess, in consultation with company management and project management, the cost of general requirements for: <ul style="list-style-type: none"> - supervision; - temporary offices and administration; - site access, protection and security; - temporary utilities; - construction facilities and service (surveys, trucking, cleanup, etc.) - hoisting; - small tools and equipment. (b) Ability to assess, in consultation with senior management, the estimated cost of bonds, insurance, permits, etc.
G.E.1200.04.08 1 question	Calculating and compiling miscellaneous costs.	(a) Knowledge of cash allowances. (b) Ability to cost solicited and unsolicited alternatives. (c) Ability to prepare separate prices.

SECTION: **BID / PROPOSAL**
16%

VALUE:

(8 questions)

TASK NO. & VALUE	TASK DESCRIPTION	TASK SUPPORTING KNOWLEDGE AND SKILLS
G.E.1200.05.01 3 questions	Complete tender submission.	(a) Knowledge of calculating unit prices, alternative prices and other items commonly required in tender submission. (b) Knowledge of company overhead and markup. (c) Ability to identify all applicable taxes to be included. (d) Ability to obtain bonds. (e) Ability to prepare tender forms.
G.E.1200.05.02 3 questions	Review and finalize bid submissions in consultation with management.	(a) Ability to assess overhead and profit requirements. (b) Ability to review and adjust amount for bonds, insurance, permits, etc. (c) Knowledge of the bid strategy.
G.E.1200.05.03 2 questions	Submit the bid/proposal.	(a) Knowledge of the methods of submitting different types of bids. (b) Ability to deliver the bid. (c) Knowledge of clarifying/qualifying bids.

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SECTION: POST BID

**VALUE: 8% (4
questions)**

TASK NO. & VALUE	TASK DESCRIPTION	TASK SUPPORTING KNOWLEDGE AND SKILLS
G.E.1200.06.01 1 question	Communicate the scope of the estimate to the project management team.	(a) Ability to convey the special conditions about the project. (b) Ability to convey the estimated plan of construction. (c) Ability to participate as a team member. (d) Ability to present the schedule.
G.P.1000.01.25 1 question	Analysing project in detail to realize cost savings through redesign.	(a) Knowledge of design methods of constructions. (b) Knowledge of alternative methods of construction. (c) Knowledge of alternative products and materials.
G.E.1200.06.03 1 question	Assist in costing changes to contract.	(a) Knowledge of company procedures in processing change orders. (b) Ability to determine impact costs for changes to the work.
G.E.1200.06.04 1 question	Participate in post tender negotiations.	(a) Knowledge of negotiating skills. (b) Ability to understand your costs.